NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

HYDROLOGIC SERVICE AREA (HSA)
WFO Jackson, Mississippi

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH: **February** YEAR: **2012**

TO: Hydrometeorological Information Center, W/OH2
NOAA / National Weather Service
1325 East West Highway, Room 7230
Silver Spring, MD 20910-3283

SIGNATURE
Alan E. Gerard, Meteorologist In-Charge

DATE
03/20/2012

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

☐ **An X inside this box indicates that no river flooding occurred within this hydrologic service area.**

Synopsis...

Spring like weather continued into the month of February across the Hydrologic Service Area (HSA). Temperatures ranged from 2 to 3 degrees above normal across the northern HSA, while central and southern portions had temperatures ranging from 3 to 5 degrees above normal. Rainfall was mostly above normal, ranging from 0.50 to 5.00 inches above. Only Southeast Arkansas, Smith and Jasper Counties in Mississippi, and our most northern Mississippi counties in the HSA had below normal rainfall, ranging from 1 to 3 inches below.

The first four days of the month brought unsettled weather. The month began with a southerly flow across the region ahead of a cold front moving across Arkansas. Rainfall progressed from southwest to northeast across the area. On the 2nd, the cold front pushed across the area into South Mississippi and stalled. This brought more rainfall to the region. The front pushed back to the north as a warm front on the 3rd bringing additional heavy rainfall to the Southwest and Central HSA. Yet another cold front pushed across the area on the 4th bringing widespread light to moderate rainfall. Four day rainfall amounts ranged from 1.50 to 3.50 inches across north and eastern portions of the HSA, while south and central areas received from 2.00 to 5.00 inches of rainfall. Surface high pressure slid into the region on the 5th and remained in place until the 9th. High pressure produced nice weather across the region. The only exception was a weak upper level trough pushing through on the 8th bringing some light scattered showers to the HSA.

A cold front moved across the region on the 10th bringing the coldest air of the season to the HSA. On the 13th, a weak upper level disturbance and weak surface cold front pushed across Southeast Louisiana. This allowed warm moist air to ride up and over the cold, dry air at the surface. Light sleet and snow accumulations were reported during the morning and midday across our northwestern HSA, while only a light rain and sleet mixture was reported elsewhere. The freezing precipitation turned to mostly light rain across the entire area by the afternoon and evening hours. Rainfall amounts ranged from 0.25 to 0.75 inches. The front in Southeast Louisiana moved off the coast and stalled on the morning of the 15th. Another cold front crossed

the HSA on the 16th and then stalled in the northern Gulf of Mexico by the 17th. Rainfall from 1.00 to 2.50 inches fell across southern portions of the HSA, while 0.25 to 1.50 inches fell over the remainder of the area. Next, an upper level system pushed eastward out of New Mexico causing a low pressure center to develop in the western Gulf of Mexico on the morning of the 18th. The low moved across Southeast Louisiana during the day producing very heavy rainfall. Amounts ranged from 1.50 to 4.00 inches along and south of Interstate 20 and 0.25 to 1.5 inches north of the interstate. High pressure pushed into the area as the upper level system and associated low pressure exited the region.

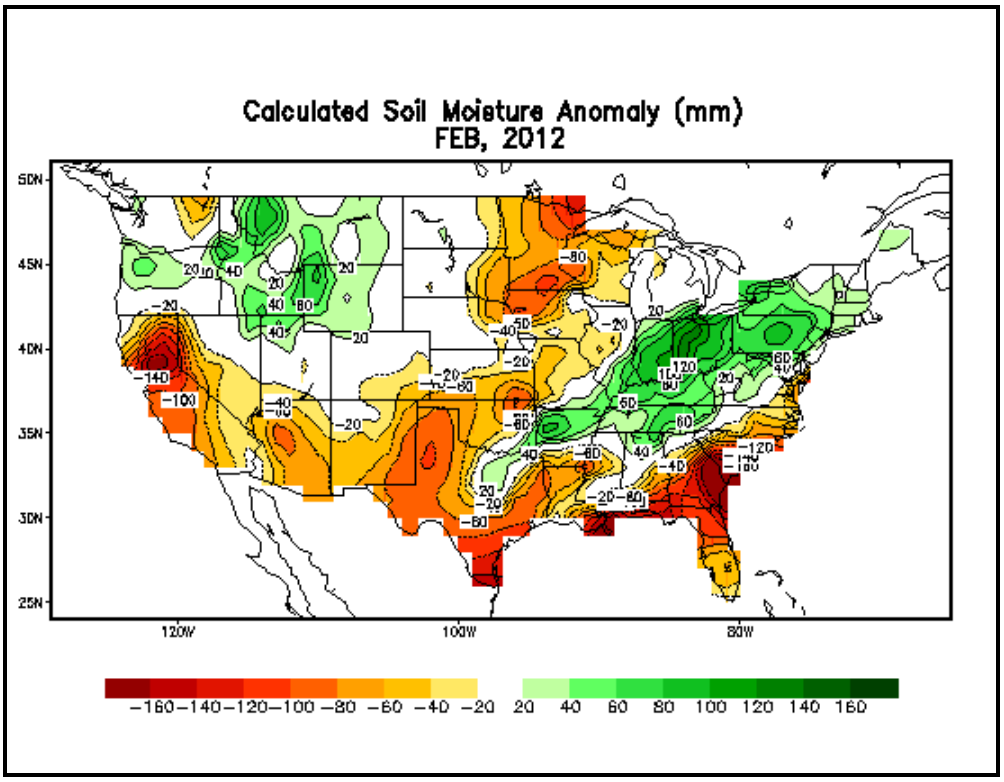
Another cold front trekked through the HSA on the 21st bringing some very light showers to northern sections. Warm and humid conditions moved back into the HSA on the 22nd and the 23rd ahead of yet another cold front on the 24th. A small line of showers formed from Marion to Forrest Counties in South Mississippi producing 0.50 inches or less. Rainfall was light and isolated across the remainder of the HSA. High pressure remained intact through the 27th.

As the high shifted eastward during the day on the 27th, warm air advection across the south allowed some showers to develop. A warm front moved across the area on the 28th ahead of a developing strong low pressure center over the Plains States. An area of showers, ranging from 0.10 to 1.50 inches, developed mainly east of Interstate 55. A cold front pushed into northern portions of the Hydrologic Service Area from the late hours of the 29th into early on the 1st bringing rainfall from 0.50 to 2.00 inches across northern counties and parishes.

River and Soil Conditions...

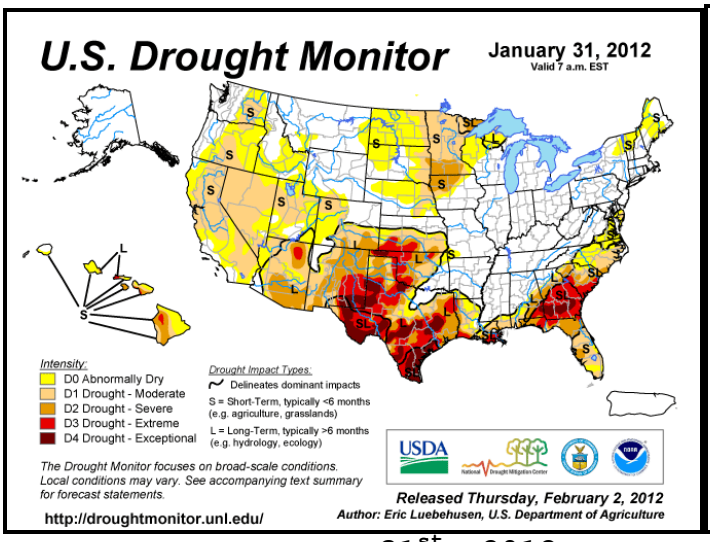
Rainfall in February ranged from 25 to 90 percent of normal from north of a Sharkey to Noxubee Counties line in Mississippi, northern Northeast Louisiana, and Southeast Arkansas. South of the Mississippi line and southern Northeast Louisiana rainfall ranged from 100 to 200 percent of normal, except for a small area in Simpson, Smith, and Jasper Counties where rainfall ranged from 75 to 100 percent of normal.

Soil moisture saw a tremendous improvement across South Mississippi and Northeast Louisiana. Soil moisture deficits in Northeast Louisiana are now 2.00 to 3.00 inches below normal, while deficits in Southeast Arkansas, Mississippi Yazoo Delta and eastward to Columbus have soil moisture deficits ranging from 1.00 to 3.00 inches. Extreme South Mississippi saw much improvement where deficts dropped to 1.00 inch or less. The remainder of South Mississippi and portions of East Mississippi had near normal soil conditions.

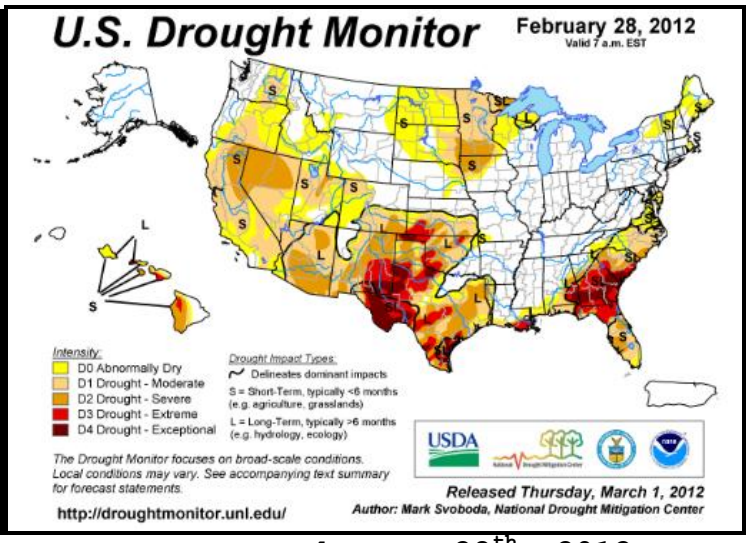


February 2012

A comparison of the January 31st U.S. Drought Monitor to the February 28th U.S. Drought Monitor showed great improvement due to substantial rainfall. No drought conditions exits across the Hydrologic Service Area. Only abnormally dry conditions exist across southern Lamar and Forrest Counties in Southeast Mississippi.

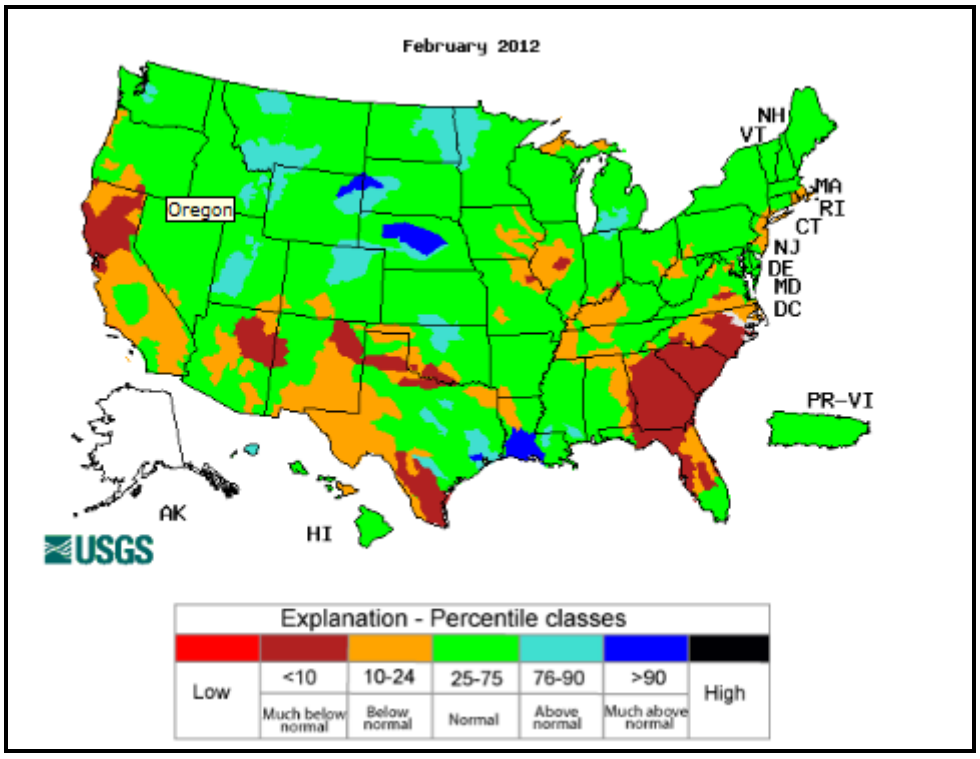


January 31st, 2012



February 28th, 2012

The United States Geological Survey's (USGS) February 2012 river streamflow records were compared with all historical February streamflow records. River streamflow was near normal with the exception of the Black Creek Basin in extreme Southeast Mississippi, where above normal streamflow conditions existed during the month.



Minor flooding occurred along the entire length of the Big Black River. The Upper Pearl, Tuscolameta Creek, and portions of the Lower Pearl also exceeded flood stage during the month. Minor to moderate rises occurred during the first week and also between the third and fourth week of the month. The Mississippi River had a significant rise below flood stage during the first two weeks of the month exceeding the action stage from Greenville to Natchez. The river crested around the 12th to 13th and receded for the remainder of the month.

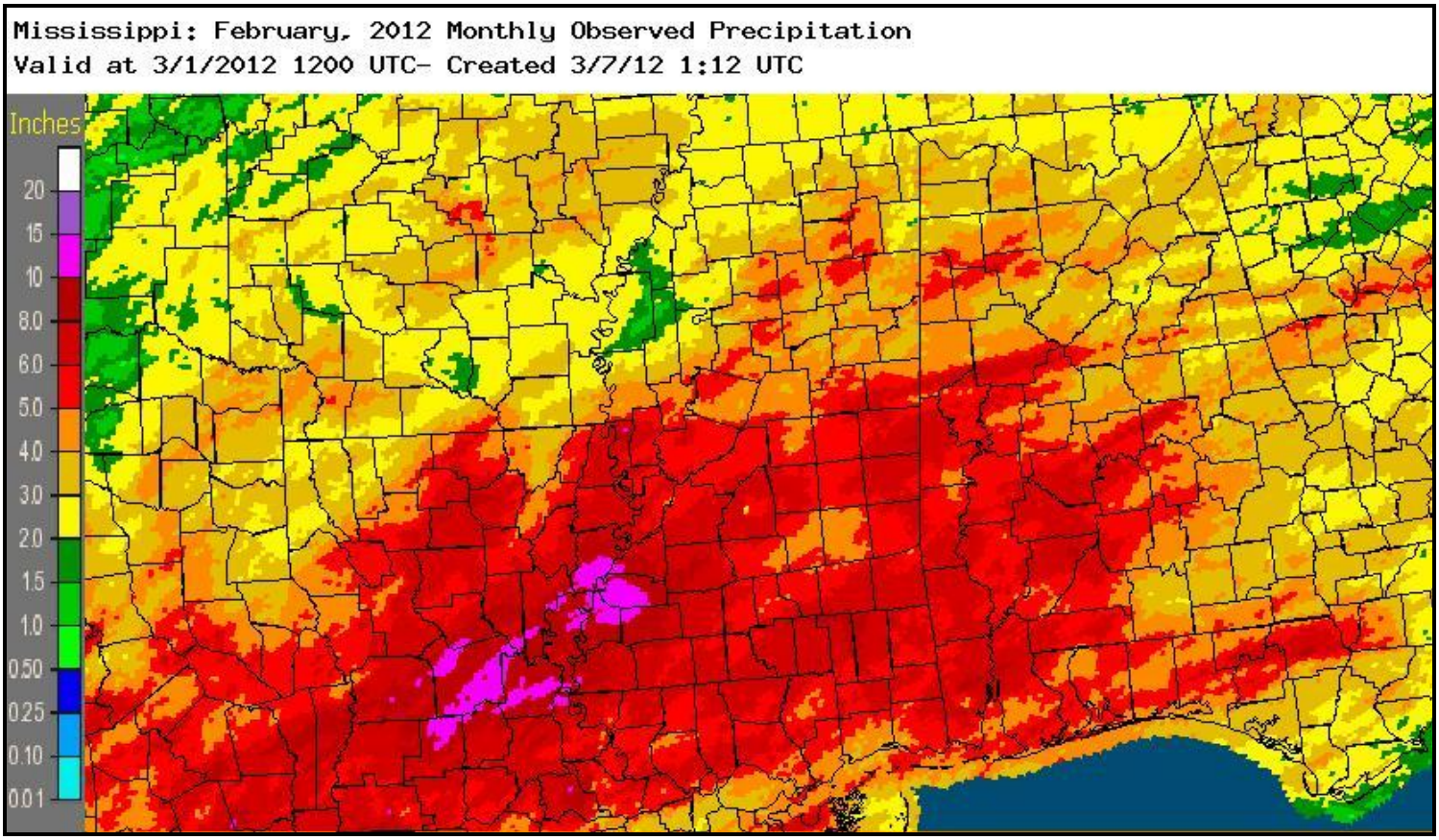
Soil moisture was below seasonal norms across all but portions of South and East Mississippi. Temperatures are expected to remain above normal while rainfall is expected to remain normal to below normal in the 1 to 3 month time period. With streamflow at normal levels, flood potentials are as follows:

***Pearl River System*:**	**Average.**
***Yazoo River System*:**	**Average.**
***Big Black River System*:**	**Average.**
***Homochitto River System*:**	**Average.**
***Pascagoula River System*:**	**Average.**
***Northeast LA and Southeast AR*:**	**Average.**
***Tombigbee River System*:**	**Average.**
Mississippi River:	**Average.**

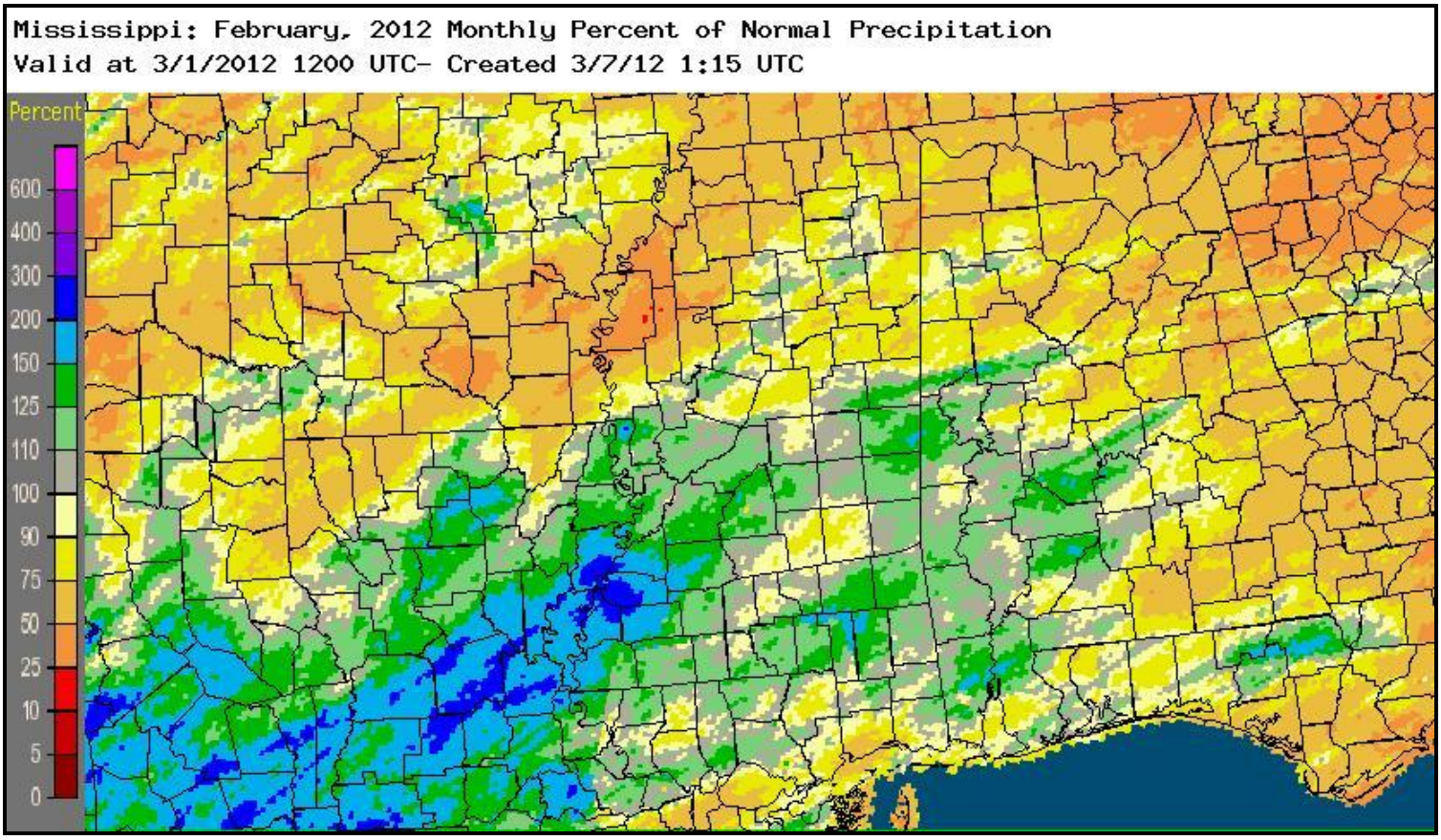
Rainfall for the month of February

The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on January 31st until 7 am on February 29th were: 12.73 inches at Jonesville Lock and Dam, LA; 11.99 inches at Vidalia, LA; 11.45 inches at Clayton, LA; 11.11 inches at Red River Lock and Dam 1, LA; 10.33 inches at St. Joseph, LA; 10.20 inches at Purvis, MS; 9.95 inches at Meadville 5SSE, M; 9.26 inches at Meadville, MS; and 9.12 inches at Sumrall, MS.

The lowest monthly rainfall totals in the HSA were: 2.26 inches at Cleveland, MS; 3.13 inches at Stoneville, MS; 3.47 inches at Dermott, AR; 3.52 inches at Elliot, MS; and 3.58 inches at Grenada Dam, MS.



February 2012 Rainfall Estimates



February 2012 Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

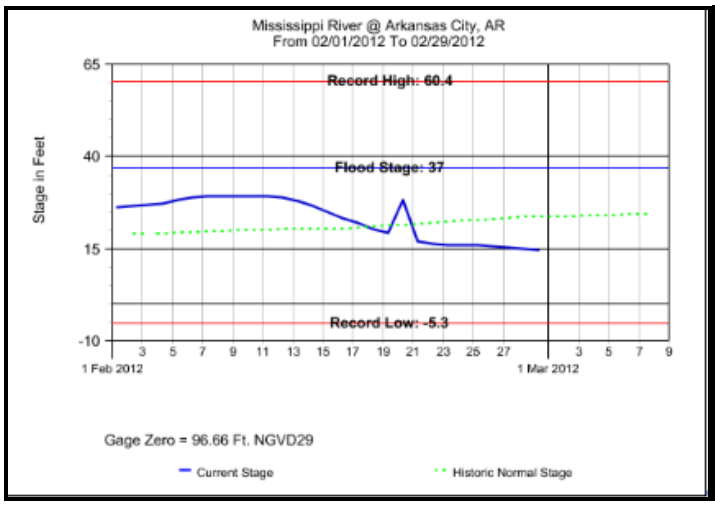
February rainfall for Selected Cities...

City (Airport)	February Rainfall	Departure from normal	2012 Rainfall	2012 Departure from Normal
Jackson, MS	8.28	+3.52	12.30	+2.57
Meridian, MS	6.05	+0.45	12.33	+1.60
Greenwood, MS	3.60	-0.82	6.08	-2.86
Greenville, MS	3.18	-1.84	4.62	-5.37
Hattiesburg, MS	8.41	+3.02	13.15	+2.02
Vicksburg, MS	6.79	+1.52	10.83	+0.49

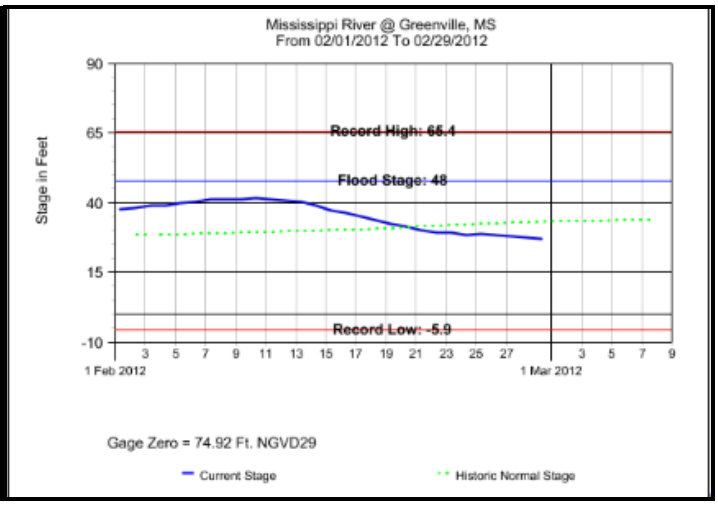
Mississippi River...

Mississippi River Plots for February, 2012

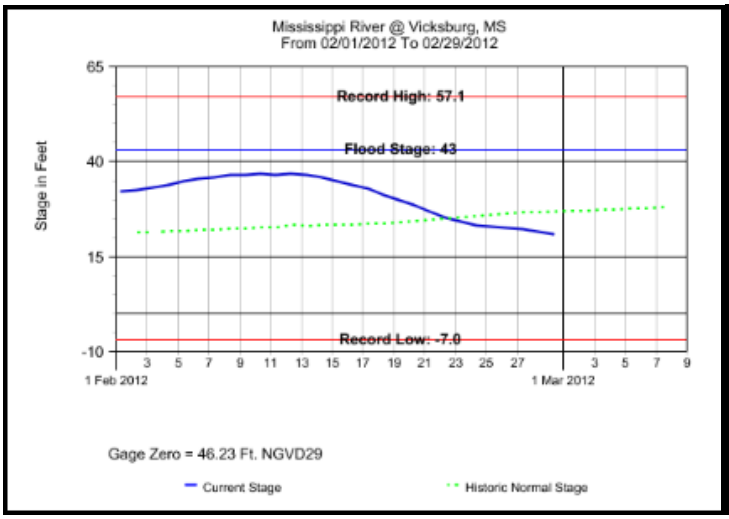
Plots Courtesy of the United States Army Corps of Engineers



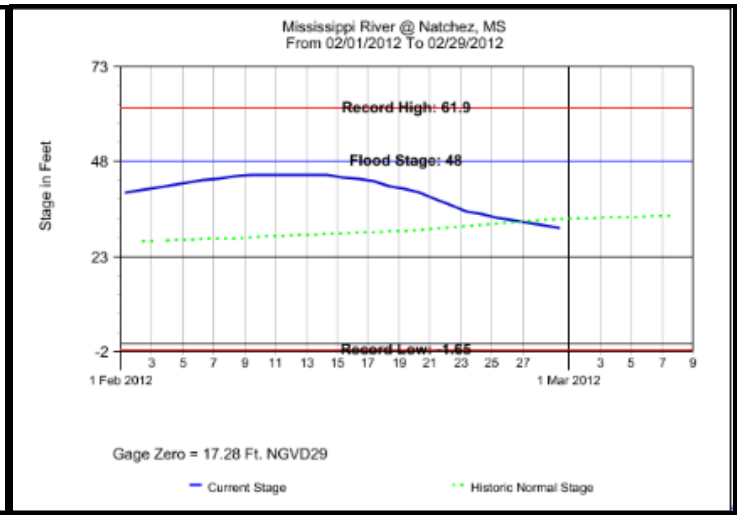
ARKANSAS CITY, MS



GREENVILLE, MS



VICKSBURG, MS



NATCHEZ, MS

Preliminary high and low stages for the month:

Location	FS	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	37	29.38	02/10/12	14.49	02/29/12
Greenville, MS	48	41.47	02/10/12	27.02	02/29/12
Vicksburg, MS	43	36.81	02/12/12	20.64	02/29/12
Natchez, MS	48	44.61	02/12/12	30.18	02/29/12

Total Flood Warning products issued: 8
Total Flood Statement products issued: 44
Total Flood Advisories MS River : 00
Daily Climate and Ag WX Products (AGO'S) issued: 29
Daily CoCoRaHS Rainfall Products (LCO'S) issued: 29
Daily River and Lake Summary Products (RVD'S) issued:29

Marty V. Pope

Service Hydrologist &
Latrice Maxie

Assistant Hydrologist/Observing Program Leader (OPL)

Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District